

SLOTTED SWITCH

T-41-73

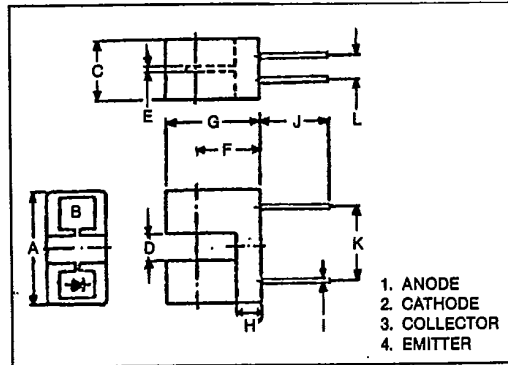
MTSS8040 INFRARED LED+PHOTO TRANSISTOR

APPLICATIONS

- OPTICAL SWITCH
- SHAFT POSITION AND VELOCITY SENSOR

FEATURES

- Both chips face each other across a 0.118 inch air gap.
- Small slit width 0.020 inch.
- Fits standard dual in-line package socket.
- No contact switching, therefore high reliability.
- Plastic case.
- Transistor detector offers faster switching speeds than darlington detectors.

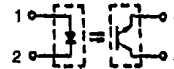


SYMBOL	INCHES	MM
A	0.512 ± 0.008	13.0 ± 0.2
B	0.020	0.5
C	0.244	6.2
D	0.118 ± 0.008	3.0 ± 0.2
E	0.020 ± 0.004	0.5 ± 0.1
F	0.270 ± 0.012	6.85 ± 0.3
G	0.394	10.0
H	0.100	2.5
I	0.018	0.45
J	0.709	18 MIN
K	0.300	7.62
L	0.100	2.54

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
A	Forward Current	IF	50 mA
	Reverse Voltage	VR	5 V
B	Collector-Emitter Voltage	VCEO	35 V
	Emitter-Collector Voltage	VECO	5 V
	Collector Power Dissipation	PC	75 mW
	Collector Current	IC	50 mA
Operating Temperature Range		Topr	-25 ~ 85 °C
Storage Temperature Range		Tstg	-40 ~ 100 °C

PIN CONFIGURATIONS (TOP VIEW)



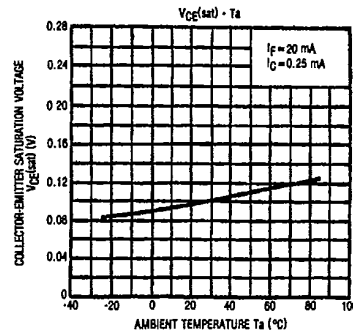
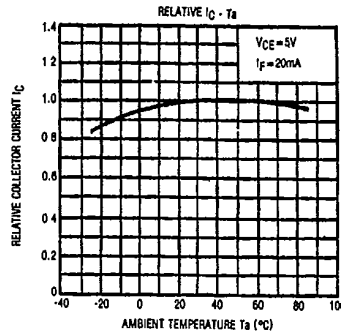
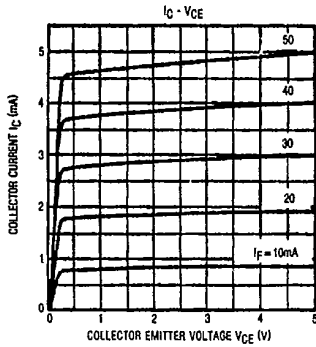
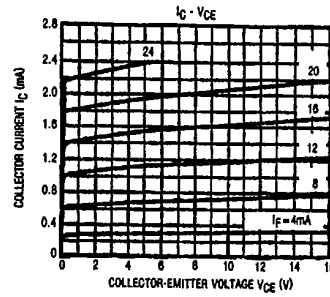
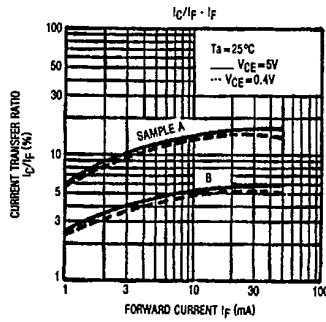
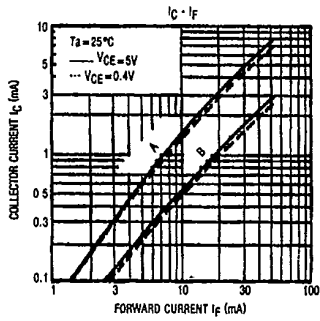
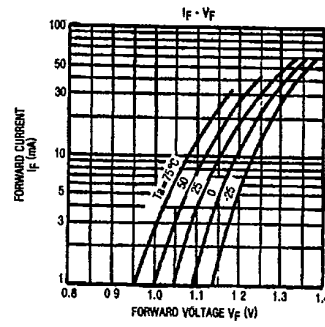
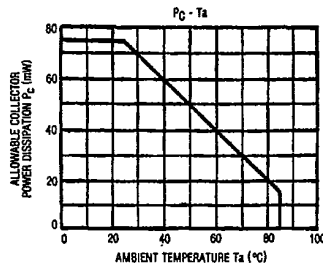
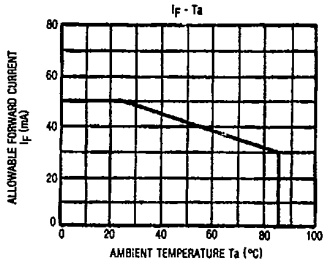
OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
A	Forward Voltage	VF = 10mA	1.00	1.15	1.30	V
	Reverse Current	VR = 5V	—	—	10	µA
	Capacitance	VT = 0, f = 1MHz	—	30	—	pF
B	Dark Current	ID(ICEO) VCE = 24V, IF = 0	—	5	100	nA
	Capacitance	VT = 0, f = 1MHz	—	13	—	pF
C	Current Transfer Ratio	IC/IF VCE = 5V, IF = 20mA	2.5	10	—	%
	Collector-Emitter Saturation Voltage	VCE(sat) IF = 20mA, IC = 25mA	—	0.1	0.4	V
	Rise Time	tR VCC = 5V, IC = 2mA	—	6	—	µs
	Fall Time	tF RL = 100Ω	—	6	—	µs

A - EMITTER B - DETECTOR C - COUPLED

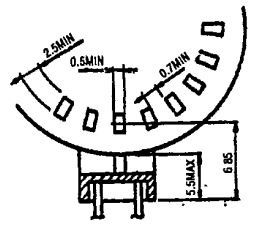
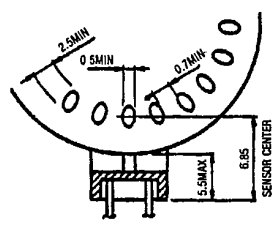
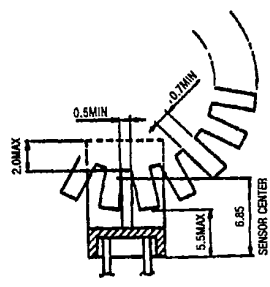
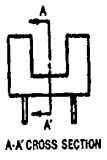
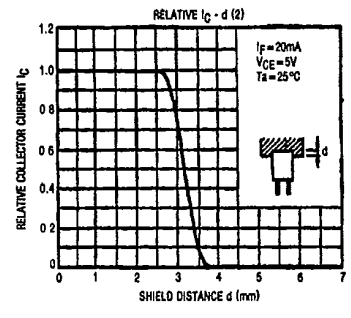
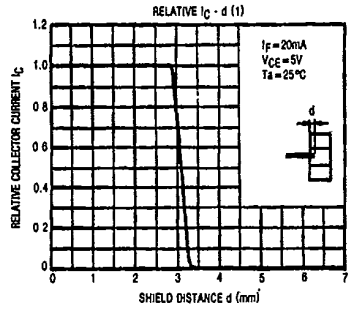
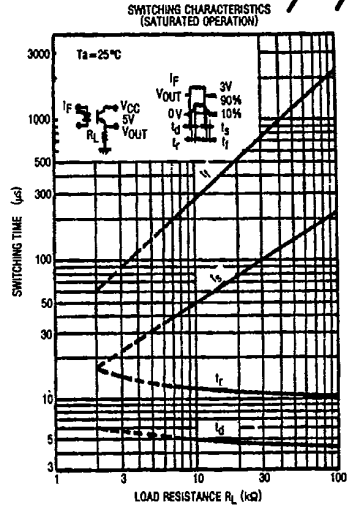
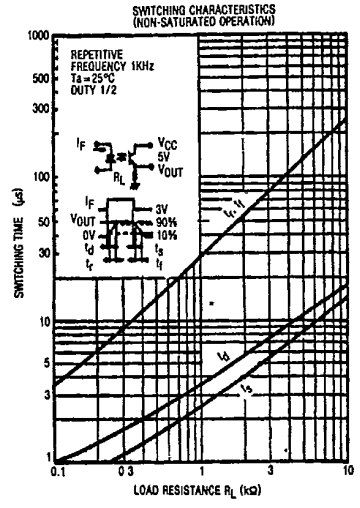
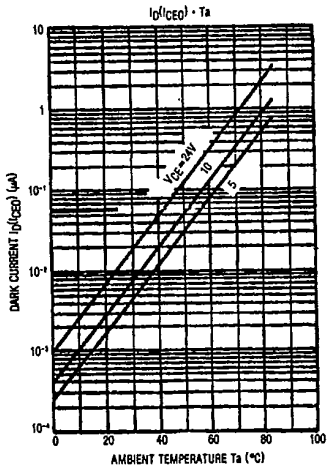
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(units in mm)